

# Mauna R. Dasari

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## PROFESSIONAL SUMMARY

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- Successful scientist and collaborator, contributing to 6 published, peer-reviewed scientific articles from multi-institution collaborations and presenting research at 7 regional or national conferences.
- Excellent written communication skills, serving as a grant writing consultant advising >200 graduate students as well as writing ecological science-based narratives read by >400,000 K-12 students.
- Excellent verbal communication skills, volunteering at 20+ public events aimed at broad audiences as well as interviews with 2 science podcasts and 3 newspapers and online periodicals.
- Established leader with over 7 different appointments in organizations aimed at promoting community engagement and/or the advancement of women in STEM.

## EDUCATION

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### University of Notre Dame

Ph.D., Biological Sciences

Notre Dame, IN

Expected 08/2021

### University of California, Berkeley

B.S., Microbial Biology; B.A., Anthropology

Berkeley, CA

12/2012

## PROFESSIONAL EXPERIENCE (SELECTED)

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### University of Notre Dame

Graduate Researcher, Archie Lab

Notre Dame, IN

08/2015 – present

- Investigated how the gut microbiome changes over primate lifespan by developing a machine learning algorithm and demonstrating its impact on the host health, leading to contributions on 5 scientific publications and disseminating the results at 7 professional conferences.
- Collaborated with scientists at the University of Nairobi and Institute of Primate Research to establish a plant DNA barcode library.
- Organized 4 successful conferences or multiday workshops promoting graduate student professional development in research and science communication.
- Communicated science to broader public audiences and K-12 students at 20+ events or lectures.

### Grants and Fellowships Consultant, Graduate School

01/2016 – present

- As Senior Consultant (05/2019 – 03/2020), managed a multidisciplinary team of grant writing specialists (consultants) leading to our graduate student clients receiving over \$30 million in grants and fellowships in 5 years.
- Advised over 200 graduate students from over 35 different disciplines on how to find and win merit-based grants or fellowships specific to their research focus or desired career trajectory.
- Generated an accessible, grant writing tutorials and an internal funding database.
- Designed and implemented interactive workshops for over 300 masters' and doctoral students.
- Interviewed, hired, and trained more than 5 grant consultants with backgrounds ranging from history and theology to chemistry and engineering.

### Argonne National Laboratory

Visiting Graduate Researcher, Earth Microbiome Project (EMP)

Lemont, IL

06/2017 – 05/2018

- Participated in 5 institution collaboration to establish a longitudinal microbiome dataset.
- Successfully processed and profiled over 22,000 baboon samples for gut microbial analyses.
- Coordinated with the EMP technicians to manage library preparation of all sequencing data.

### Telomere Diagnostics, Inc.

Research Associate, Assay Development and Validation

Menlo Park, CA

12/2013 – 07/2015

- Translated research into validated clinical assays and into the releasable product stage.
- Trained 6+ research or clinical scientists in performing clinical assays.

## OUTREACH EXPERIENCE

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### University of Notre Dame

Scientist-Narrator, March Mammal Madness

Notre Dame, IN

02/2017 – present

- Communicated science in engaging narrative Twitter threads styled after the NCAA March Madness Bracket.

- Researched the ecology, evolution, and behavior of little-known mammals to educate broad audiences about the conservation and stewardship of the natural world through storytelling.
- In 2020, more than 5000 educators serving over 410,000 students requested early access, in addition to the 4,000-9,000 unique Twitter users (Twitter estimates across years).

**Organizer, ComSciCon Chicago**

12/2018 – 08/2019

- Organized and implemented a science communication conference for 50 graduate students, including finding venues, speakers, and fundraising opportunities.
- Wrote a successful grant of \$2500 to cover speaker honorariums and other conference costs.

**Outreach Chair, Association of Women in Science, ND (AWIS-ND)**

01/2018 – 04/2019

- Promoted community engagement and supported women in STEM by implementing science outreach initiatives and organizing events like professional development workshops and socials.
- Led a committee of 4 to strengthen the mentoring program (STEMentorship) by assessing the individual needs of undergraduate mentees and pairing them with suitable graduate mentors, evaluating the program effectiveness, and facilitating relationships through 6 events.
- Organized a charity event, 5K, and led a committee of 15. Raised over \$2,000 for the local Boys and Girls Club.

**Stanley Clark School****South Bend, IN****Science Olympiad Coach**

11/2017 – 03/2020

- Instructed a team of middle school students how to be scientists through formulating research questions, generating hypotheses, and conducting experiments to win team science competitions.

**LEADERSHIP EXPERIENCE****University of Notre Dame****Notre Dame, IN****President, Biology Graduate Student Organization**

03/2017 – 03/2018

- Revitalized the graduate student governing body by improving communication, liaising with the department administration, and doubled operating budget by raising \$4,000 in new revenue.
- Created sustainable club infrastructure through implementation of documentation for events.
- Managed executive board of 10 graduate students and student body of >100 graduate students.

**Organizer, EDAMAME**

05/2016 – 07/2016

- Hosted a remote microbial bioinformatics workshop to promote greater accessibility for a broader audience of graduate students, resulting in 15 students from over 5 disciplines participating.
- Secured \$1000 grant to publicize event to relevant disciplines in College of Science.

**COMMUNITY ENGAGEMENT EXPERIENCE****St. Joseph County, IN****South Bend, IN****Founding Member, Irish 4 Reproductive Health**

01/2018 – present

- Organized events in the Notre Dame and larger South Bend community focused on increasing access to reproductive healthcare.
- Created talking points and media training in collaboration with National Women's Law Center, Americans United for the Separation of Church and State, and Catholics for Choice.
- Supported media outreach through interviews with the [Chicago Tribune](#) (2018), [Pacific Standard](#) (2018), [Rewire](#) (2020), written press releases, and an op-ed for the [South Bend Tribune](#) (2018).
- Trained other students for media outreach in support of club activities as Director of Operations.

**Founding Member, Graduate Students Against Racial Injustice at Notre Dame**

05/2020 – present

- Wrote documents aimed at highlighting ways to increase diversity, equity, and inclusion in both the faculty and student populations at Notre Dame, including and actions for all institutional levels.
- Conducted meetings with multiple levels of the academic hierarchy, from our Department Chair up to the University Provost.
- Created and managed a Facebook group in order to grow and more efficiently communicate across departments.

**Director of Programming, March for Science South Bend**

02/2017 – 04/2017

- Steered the programming committee of 3 for the inaugural March for Science South Bend, seeking out speakers, organizing a teach-in by local science groups, and creating the event layout.

## TEACHING AND MENTORING EXPERIENCE

### *Graduate Teaching Assistant*

Spring 2017; Fall 2018, 2020

- Lectured about the underlying principles of various lab techniques and biological processes for Biological Investigations Lab (60 undergraduates, 2 semesters) and Animal Behavior (100 undergraduates, 1 semester).
- Assisted students 1-on-1 to make sure they were grasping the material, not memorizing details.

### *STEM Mentor, AWIS-ND*

10/2015 – present

- Supported undergraduate women in STEM by providing 1-on-1 mentoring and career guidance, including funding opportunities, undergraduate research, and different career options.
- Mentored 6 undergraduate students (1/yr), 2 have already gone onto graduate schools in STEM.

## GRANTS, FELLOWSHIPS, AND AWARDS

Postdoctoral Research Fellowship in Biology, National Science Foundation.	2022-2024
2022 CCST Science Fellow Finalist, California Council on Science and Technology ( <i>declined</i> ).	2021
Trailblazing Graduate Research Award, Ecological Society of America.	2020
Diversity Travel Award, Animal Behavior Society.	2019
Graduate Student Union Conference Presentation Grant, University of Notre Dame.	2017 – 2019
Zahm Research Travel Grant, University of Notre Dame.	2017, 2019
Leadership Engaging Socially Engaged Research Fellow, University of Notre Dame.	2017 – 2018
GLOBES Minigrant, University of Notre Dame.	2017
Summer Institutes Scholarship, Department of Biostatistics, University of Washington.	2017
Graduate Research Fellowship, Honorable Mention, National Science Foundation.	2017
Rapid Exposure to Advanced Computation Training Grant, University of Notre Dame.	2017
Graduate Student Life Grant, University of Notre Dame.	2016
Social Responsibilities of Research Fellow, University of Notre Dame.	2016 – 2017
Dean's Fellowship, University of Notre Dame.	2015 – 2020

## PRESENTATIONS (SELECTED)

### *Invited*

Zoom Seminar, Kennesaw State University. Virtual.	2021
Zoom Seminar, University of Findlay. Virtual	2021

### *Contributed*

Talk (Zoom), Mammalian Microbiome Research Meeting. Virtual.	2020
Recorded Talk, Ecological Society of America Annual Meeting. Virtual.	2020
Recorded Talk, Animal Behavior Society Annual Meeting. Virtual.	2020
Talk, Nonhuman Primates in Evolutionary Medicine Meeting. Tempe, AZ.	2019
Talk, Ecological Society of America Annual Meeting. Louisville, KY.	2019
Talk, Animal Behavior Society Annual Meeting. Chicago, IL.	2019
Poster, Conference on Beneficial Microbes. Madison, WI.	2018
Invited Internal Seminar, Mammalogy Class. Notre Dame, IN.	2018
Poster, Women in Science Regional Conference. Notre Dame, IN.	2017

## PUBLICATIONS

### *Peer-reviewed*

Grieneisen L, **Dasari M**, Gould TJ, Björk JR, Grenier JC, Yotova V, Gottel N, Jansen D, Roche K, Mukherjee S, Gesquiere LR, Gordon JB, Learn NH, Wango TL, Mututua RS, Warutere JK, Siodi L, Barreiro LB, Alberts SC, Gilbert JA, Tung J, Blekman R, Archie EA. "Gut microbiome heritability is near-universal but environmentally contingent." (2021) *Science* 373(6551): 181-186. doi: [10.1126/science.aba5483](https://doi.org/10.1126/science.aba5483)

Hinde K, Amorim CEG, Brokaw A, Burt N, Casillas MC, Chen A, Chestnut T, Connors PK, **Dasari M**, Ditelberg CF, Dietrick J, Drew J, Durgavich L, Easterling B, Henning C, Hilborn A, Karlsson EK, Kissel M, Kobylecky J, Krell J, Lee DN, Lesciotto KM, Lewton KL, Light JE, Martin J, Murphy A, Nickley W, Nuñez-de la Mora A, Pellicer O, Pellicer V, Perry AM, Shuttler SG, Stone AC, Tanis B, Weber J, Wilson M, Willcocks E, Anderson C. (2021) "March Mammal Madness and the power of narrative in science outreach." *eLife*. 10:e65066. doi: [10.7554/eLife.65066](https://doi.org/10.7554/eLife.65066)

Levy E, Zipple M, McLean E, Campos F, **Dasari M**, Fogel A, Franz M, Grieneisen L, Gesquiere L, Gordon J, Habig B, Jansen D, Learn N, Weibel C, Altmann J, Alberts SC, Archie EA. (2020) "Comparing proportional and ordinal dominance ranks reveals multiple competitive landscapes in an animal society." *Proceedings of the Royal Society B: Biological Sciences*. **287**(20201013). doi: [10.1098/rspb.2020.1013](https://doi.org/10.1098/rspb.2020.1013)

Björk J, **Dasari M**, Grieneisen L, Archie E. (2019) Primate microbiomes over time: Longitudinal answers to standing questions in microbiome research. *American Journal of Primatology*. e22970. doi: [10.1002/ajp.22970](https://doi.org/10.1002/ajp.22970)

Goltsman DS, **Dasari M**, Thomas BC, Shah MB, VerBerkmoes NC, Hettich RL, Banfield JF. (2013) A new group in the Leptospirillum clade: cultivation-independent community genomics, proteomics and transcriptomics of the new species *Leptospirillum* group IV UBA BS. *Applied and Environmental Microbiology* **79**(17): 5384-93. doi: [10.1128/AEM.00202-13](https://doi.org/10.1128/AEM.00202-13)

#### *In press*

Ishaq SL, Parada Flores FJ, Wolf PG, Bonilla CY, Carney MA, Benezra A, Wissel E, Friedman M, DeAngelis KM, Robinson JM, Fahimipour AK, Manus MB, Grieneisen L, Dietz LG, Chauhan A, Pathak A, Kuthyar S, Stewart JD, **Dasari M**, Nonnamaker E, Choudoir M, Horve PF, Zimmermann NB, Kozik AJ, Darling KW, Romero-Olivares AL, Hariharan J, Farmer N, Maki K, Collier JL, O'Doherty K, Letourneau J, Kline J, Moses PL, Morar N. "Introducing the Microbes and Social Equity Working Group: Considering the Microbial Components of Social, Environmental, and Health Justice". (2021) *mSystems*

#### *Under review*

Björk JR, **Dasari M**, Grieneisen L, Gould TJ, Grenier JC, Yotova V, Gottel N, Jansen D, Roche K, Mukherjee S, Gesquiere LR, Gordon JB, Learn NH, Wango TL, Mututua RS, Warutere JK, Siodi L, Barreiro LB, Alberts SC, Gilbert JA, Tung J, Blekhman R, Archie EA. "Synchrony and idiosyncrasy in the gut microbiome of wild primates." In review at *Science Advances*

Amorim EC, **Dasari M**, Durgavich L, Hinde K, Kissel M, Lewton K, Loewen T. "Integrative approaches to dispersing science: a case-study of March Mammal Madness." In review at *American Journal of Human Biology*

#### *In preparation*

**Dasari M**, Roche K, Anderson J, Jansen D, Gilbert JA, Barreiro LB, Altmann J, Alberts SC, Blekhman R, Mukherjee S, Tung J, Archie EA. "The mammalian gut microbiome is a marker of biological aging in wild baboons."

Aliaga Goltsman DS, Hauser L, **Dasari M**, Thomas B, Banfield JF. Differential gene expression and the importance of ncRNA in acidophilic microorganisms.

#### *Audio*

**Dasari M**. Presenter. "Science Communication in Creative Places." *Science for the People*, October 19, 2020. <https://bit.ly/2XaUu1y>

**Dasari M**. Presenter. "Science under the microscope (Prove It: Part 2)." *Brains On!*, October 9, 2018. <https://bit.ly/2UyOZci>

#### *Non-peer reviewed*

**Dasari M**. (2012) The biology, development, and host distribution of epifoliar fungi in the mangrove ferns (*Acrostichum aureum*) of Mo'orea, French Polynesia. *UC Berkeley: UCB Moorea Class: Biology and Geomorphology of Tropical Islands*.

### **OTHER PUBLIC OUTREACH AND COMMUNITY ENGAGEMENT**

Meet a Scientist, St. Joseph County Library, South Bend, IN.	03/25/21
Panelist, LEAH Project, Boston, MA	12/04/2020
Skype a Scientist (10-11 <sup>th</sup> Grades), Northtown Academy High School, Chicago, IL	03/25/2020
Skype a Scientist (5-7 <sup>th</sup> Grades, Special Education), Summit School, Flushing, NY	03/10/2020
Skype a Scientist (3 <sup>rd</sup> Grade), Floral Street School, Shrewsbury, MA	11/05/2019
Skype a Scientist (10 <sup>th</sup> Grade), Minooka Community High School, Minooka, IL	10/03/2019
Skype a Scientist (7 <sup>th</sup> Grade), Instituto Chapultepe. Culiacán, Sinaloa, México	09/25/2019
Volunteer, Animal Behavior Society Outreach Fair, Chicago, IL	07/25/2019

Skype a Scientist (10-12 <sup>th</sup> Grades), South Forsyth High School, Cumming, GA	04/10/2019
Workshop Leader, Expanding Your Horizons, Notre Dame, IN	03/30/2019
Skype a Scientist (9 <sup>th</sup> Grade), Walton High School, Marietta, GA	02/05/2017
Skype a Scientist (11-12 <sup>th</sup> Grades), Walton High School, Marietta, GA	02/28/2017
Skype a Scientist, (6-7 <sup>th</sup> Grades) I.S. 187, Brooklyn, NY, Brooklyn, NY	11/10/2017
Volunteer, Darwin Day, North Carolina Museum of Natural Sciences, Raleigh, NC	02/11/2017
Volunteer, Science Alive!, St. Joseph County Library. South Bend, IN	02/04/2017
Guest Engagement Ambassador, Lincoln Park Zoo. Chicago, IL	04/2016 – 12/2016
Tutor, Robinson Community Learning Center. South Bend, IN	02/2016 – 12/2016
Guest Lecturer, Elkhart Memorial High School, Elkhart, IN	12/06/2016
Volunteer, Animal Behavior Society Outreach Fair. Columbia, MO	07/30/2016
Volunteer, Science Alive!, St. Joseph County Library. South Bend, IN	02/06/2016
Science Fair Judge, Swanson Primary School, South Bend, IN	01/28/2016
Docent, San Francisco Zoo. San Francisco, CA	02/2014 – 08/2015
Wildlife Volunteer, Suisun Wildlife Rehabilitation Center. Suisun City, CA	2013
Guest Instructor, ESA SEEDS. Berkeley, CA	2011
Volunteer, Cal Rotaract. Berkeley, CA	09/2009 – 12/2010
Guest Instructor, Wonderworks. Berkeley, CA	08/2008 – 12/2008

## PROFESSIONAL SERVICE

Manuscript Reviewer, <i>Animal Conservation</i>	2021
Inclusion and Equity Committee, Graduate Women in Science Fellowship Program	2020 – 2021
Ecology/Evolution Faculty Hiring Committee Member, University of Notre Dame	2020 – 2021
Grant Reviewer, Ecological Society of America Student Section	2021
Mentoring and Anti-Bullying Task Force, University of Notre Dame	2019 – 2020
Grant Reviewer, Critical Language Scholarship Program	2019
Manuscript Reviewer, <i>PLoS One</i>	2019
Grant Consultant, Institute of Teaching and Mentoring, Southern Regional Education Board	2018
Steering Committee Member, Women Leaders in STEM, University of Notre Dame	2018
Grant Reviewer, Graduate Women in Science Fellowship Program	2018
Conference Committee, International Primatological Society	2018

## PROFESSIONAL DEVELOPMENT ACTIVITIES

Reclaiming STEM Science Communication Workshop	2020
Science Policy Memo Writing Workshop	2020
Leadership Advancing Socially Engaged Research Fellowship	2017 – 2018
GLOBES Communication Module	2018
Strategies and Techniques for Analyzing Microbial Population Structures Workshop	2017
Summer Institute in Statistics for Modeling in Infectious Diseases	2017
Summer Institute in Statistics for Big Data	2017
Kaneb Center for Teaching and Learning Community Engagement Certificate	2017
Social Responsibilities of Research Fellowship	2016 – 2017
CSC Graduate Certificate in Community Engagement and Public Scholarship	2016
Leadership and Innovation in Biology Certificate	2016
Explorations in Data Analyses for Metagenomic Advances in Microbial Ecology	2016
Evolution Course Teaching Module	2015

## PROFESSIONAL MEMBERSHIPS

Graduate Women in Science	2020 – present
Sigma Xi	2019 – present
Ecological Society of America	2019 – present
Animal Behavior Society	2019 – present
Association of Women in Science	2015 – present

## SKILLS

**Computer and Statistical Skills:** Microsoft Office (Word, Excel, Powerpoint), Unix, SQL, Python, Git, R, SAS JMP, machine learning, mixed modeling, survival models

**Laboratory Techniques:** DNA extraction, PCR, qPCR, library prep, gel electrophoresis, HPLC, aseptic technique, plating, SDS-PAGE.

## REFERENCES

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*Available upon request*